

Application Serial No. 10/775,721
Attorney's Docket No.: 07319-067004

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

kindly cancel claim 1 and substitute the following new claims therefore.

1. (Cancelled)
2. (New) A lighting system, comprising:
a light source, which forms light;
an optical train, which directs said light along an optical path which includes both in focus and out of focus locations;
a first color changing element, allowing a color of the light to be changed at a first in focus location along said optical path; and
a second color changing element, allowing a color of the light to be changed at a first out of focus location along said optical path.
3. (New) A system as in claim 2, wherein one of said color changing element as is a rotating RGB color wheel, which rotates in synchronism with a desired light.
4. (New) The system as in claim 2, wherein one of said color changing element as is a color cross fader.

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5. (New) The system as in claim 2, further comprising another color element, which includes discrete color filters.

6. (New) The system as in claim 3, wherein each of said first color changing element and said second color changing element includes clear portions which can be selected to allow light to pass without color is being changed.

7. (New) The system as in claim 1, wherein one of said color changing elements is an element with discrete color filters.

8. (New) The system as in claim 2, wherein each of said first and second color changing elements each include controllable motors therein, and further comprising a motor control bus connected to each of said first and second controllable motors.

9. (New) The system as in claim 8, further comprising a controller, enabling control of each of said first and second color changing element over said motor control bus.

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10. (New) The device as in claim 9, wherein said controller communicates with said motors, using a command format which includes a command, in a first time slot, followed by data associated with said command, in at least one time slot following said first time slot, and having a specified timing relationship with said first time slot.

11. (New) The device as in claim 8, wherein said motor control bus controls said first and second controllable motors using a time division multiplexed communication in which a function is associated with information associated with the function, at a time related to a time of the function.

12. (New) A lighting system, comprising:
a light source and optical system which forms light, and directs said light along an optical path;
a first light modifying device, including a first motor therein, which is operable based on a position of said motor to change an aspect of said light;
a second light modifying device, separate from said first light modifying device, and including a second motor therein, which is operable based on a position of said second motor, to

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change a different aspect of said light than said first aspect;
and

a motor control bus, connected to said first and second
motors, and communicating information associated with said first
and second motors, where a significance of said information
being dependent on a time slot on said motor control bus.

13. (New) A system as in claim 12, further comprising a
processor which communicates over said motor control bus with
said first and second motors.

14. (New) A system as in claim 13, wherein said processor
communicates by a format having a function in a specified form
followed by data associated with the command, in specified time
slots.

15. (New) A system as in claim 13, wherein said processor
communicates commands to said first and second motors.

16. (New) A system as in claim 15, wherein said processor
also receives data from said first and second motors.

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17. (New) A system as in claim 12, wherein said first light modifying device is a color changer, and said second light modifying device is a controllable optical element.

18. (New) A system as in claim 17, wherein said controllable optical element is an optical zoom part.

19. (New) A system as in claim 12, wherein said first light modifying device is a color changer, and said second light modifying device is a pan and tilt mechanism for the direction of light projection.

20. (New) A system as in claim 12, wherein said motor control bus communicates addressed information which is addressed to one of the items on said bus, and also includes a function command associated with said address.

21. (New) A system as in claim 20, wherein said function command includes data associated with the command.

22. (New) A system as in claim 20, wherein said command is a command to move the motor, and said data represents a position to which the motor should be moved.

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23. (New) A system as in claim 22, wherein said data further represents a time of motor movement.
24. (New) A system as in claim 22, wherein said data further represents a time range during which the motor should be moved.
25. (New) A system as in claim 22, wherein said data further represents a profile of movement of motor operation.
26. (New) A system as in claim 13, wherein one of said commands allows the processor to directly control one of said first and second motors.
27. (New) A system as in claim 12, wherein said optical system includes a digital light shaping device which allows digitally controlling shapes of light which pass along the optical path.
28. (New) A method, comprising:
forming a beam of light;
directing said beam of light along an optical path;

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first modifying said beam of light using a motor controlled device to make a first modification to said beam of light;

second modifying said beam of light using a second motor controlled device to make a second modification to said beam of light that is different than said first modification; and

controlling said first modifying and said second modifying over a motor control bus, in a format that allows sending a first part indicative of a function, and a second part indicative of data associated with said function, where said second part has a specified time slot relationship with said first part.

29. (New) A method as in claim 28, further comprising using a common controller to communicate over said motor control bus and to control said first modifying and said second modifying.

30. (New) A method as in claim 28, wherein said first modifying comprises changing a color of the light.

31. (New) A method as in claim 28, wherein said first modifying comprises changing an optical characteristic of the light.

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32. (New) A method as in claim 31, wherein said changing an optical characteristic comprises changing a characteristic of an optical zoom.

33. (New) A method as in claim 28, wherein said first modifying comprises changing a position of projection of the light.

34. (New) A method as in claim 33, wherein said changing positioning comprises controlling pan and tilt motors.

35. (New) A method as in claim 30, wherein said second modifying comprises changing a characteristic of an optical function of the light.

36. (New) A method as in claim 30, wherein said second modifying comprises changing the position of projection of the light.

37. (New) A method as in claim 28, wherein said controlling comprises sending a function, and sending data associated with the function.

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38. (New) A method as in claim 37, wherein said function comprises a control to move a motor within one of the motor controlled devices, and said data comprises a position to which the motor should be moved.

39. (New) A method as in claim 38, wherein said controlling further comprises sending data representing a time profile of the motor operation.

40. (New) A method as in claim 28 further comprising, along said optical path, digitally controlling a shape of the light.

41. (New) A lighting system, comprising:
means for forming light along an optical path;
a first light modifying means for controlling a first aspect of said light, said first light modifying means including a first motor means for moving a position based on an applied command;

a second light modifying means for controlling a second aspect of said light, said second light modifying means including a second motor means for moving a position based on an applied command; and

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a motor control bus means for communicating said applied commands to both of said first and second light modifying means.

42. (New) A system as in claim 41, further comprising controller means for sending said applied commands to said first and second light modifying means and for receiving information from said first and second light modifying means.

43. (New) A system as in claim 41, wherein said motor control bus means is also for operating in a time division multiplexed format.

44. (New) A system as in claim 43, wherein said time division multiplexed format is one where a command defines a time period associated with the command, during which time period data associated with the command is provided.

45. (New) A system as in claim 41, further comprising a third light modifying means, for controlling a third aspect of said light, also connected to said motor control bus.

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46. (New) A system as in claim 41, wherein one of said light modifying means is an electrically controllable color changer.

47. (New) A system as in claim 41, wherein one of said light modifying means is an electronically controllable optical characteristic mechanism.

48. (New) A system as in claim 41, wherein one of said light modifying means includes means for controlling a location of an output beam.

49. (New) A system as in claim 41, further comprising means, along said optical path, for digitally controlling a shape of light which passes.